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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/524,205

Filing Date: August 02, 2005

Appellant(s): KOHL ET AL.

Glenn M. Massina
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 08 November 2010 appealing from the Office action mailed 08 June 2010.

(1) Real Party in Interest

The examiner has no comment on the statement, or lack of statement, identifying by name the real party in interest in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The following is a list of claims that are rejected and pending in the application:
Claims 15-28 stand rejected.

(4) Status of Amendments After Final

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

(5) Summary of Claimed Subject Matter

The examiner has no comment on the summary of claimed subject matter contained in the brief.

(6) Grounds of Rejection to be Reviewed on Appeal

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office action from which the appeal is taken (as modified by any advisory actions) is being maintained by the examiner except for the grounds of rejection (if any) listed under the subheading "WITHDRAWN REJECTIONS." New grounds of rejection (if any) are provided under the subheading "NEW GROUNDS OF REJECTION."

WITHDRAWN REJECTIONS

The following grounds of rejection are not presented for review on appeal because they have been withdrawn by the examiner. The rejection of claims 15-22 under 35 U.S.C 112 2nd paragraph.

(7) Claims Appendix

The examiner has no comment on the copy of the appealed claims contained in the Appendix to the appellant's brief.

(8) Evidence Relied Upon

6,517,170	Hofsaess et al.	03-2000
4,255,088	Newton et al.	03-1981

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 15-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hofsaess et al. (6,517,170) in view of Newton et al. (4,255,088).

Hofsaess et al. teach an electrohydraulic brake system and method for motor vehicles of the brake-by-wire type including a hydraulic pressure source that can be actuated by means of an electronic control unit and is comprised of a hydraulic pump driven by an electric motor and a high-pressure accumulator adapted to be recharged by the pump. However, Hofsaess et al. do not teach wherein a means is provided for monitoring the hydraulic delivery rate of the pump and determining quantities of gas or air at the suction side of the pump based on the monitored hydraulic delivery rate.

Newton et al. teach a means is provided for monitoring the hydraulic delivery rate of the pump and determining quantities of gas or air at the suction side of the pump based on the monitored hydraulic delivery rate (fig. 1, col.1, lines 23-26). The abstract of Newton et al. further states “Gas within the pump may be detected to indicate an

error in desired flow rate or displaced volume... Further, the flow rate may be corrected to the desired rate". This statement means that Newton et al. monitors the hydraulic flow rate of the pump and quantities of gas in the pump. It would have been obvious to one of ordinary skill in the art at the time the invention was made to determine quantities of gas or air at the suction side of the pump in order to optimize operation of the system.

In Re claims 16 and 23, the examiner points out that electromotive force has a measurement in volts, which Newton et al. discloses monitoring (col. 2, line 61 – col. 3, line 15).

In Re claims 17 and 24, Hofsaess et al., as modified, do not disclose the monitoring of the power consumption of the motor to determine the hydraulic delivery rate, however, it would have been obvious to one of ordinary skill in the art to monitor the power consumption to determine the hydraulic delivery rate instead of monitoring the voltage as a matter of engineering design choice. The examiner notes that power consumption and voltage are proportionally related, and one of ordinary skill in the art would choose what to monitor based on convenience.

In Re claims 18 and 25, the examiner points out that Hofsaess et al. disclose monitoring the rotational speed of the pump, and thus the rotational speed of the motor driving the pump as the two are directly related (see col. 5, lines 5-9). The examiner also points out that Newton et al. disclose monitoring the rotational pulses, and thus the rotational speed, of the electric motor (col. 3, line 6 - line 21).

(10) Response to Argument

Regarding the rejection by Hofsaess et al. in view of Newton et al., Appellant argues that:

1. Newton et al. is nonanalogous art.
2. Newton et al. does not monitor the flow rate, or determine the quantity of gas in the pump by analyzing the hydraulic delivery rate of the pump.
3. Newton et al. fails to suggest monitoring electromotive force, and that the office action fails to address this feature of claim 16.
4. Newton et al. fails to suggest monitoring electric power consumption of the electric motor, and that the office action fails to address this feature of claim 17.
5. Newton et al. fails to suggest monitoring rotational speed of the electric motor, and that the office action fails to address this feature of claim 18.

The examiner first notes that the claim limitations are given the broadest reasonable interpretation in light of the disclosure.

Regarding Appellant's first point, the examiner maintains that the pump of Newton et al. is analogous art. In response to Appellant's argument, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention.

See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, the

examiner feels that the art is reasonably pertinent since Newton et al. is trying to solve the problem of controlling flow through a pump. As previously discussed on page 5 of the Final office action, the basis of Appellant's argument appear to be the intended use of the device of Newton et al. Column 1 lines 9-15 of Newton et al. disclose that "**Illustrative** of such fields are the pumping of physiological liquids in the medical field and ... chromatography systems" (emphasis added). In response to this argument, the examiner notes that this list is not meant to be an exclusive list to the use of invention of Newton et al. Additionally, the examiner further points out that the disclosure is directed to a pump system in general.

Regarding Appellant's second argument, the examiner maintains that Newton et al. does monitor the flow rate and quantities of gas in the pump based on the monitored hydraulic delivery rate. As discussed in the Advisory action mailed on 16 August 2010, the examiner points to the abstract of Newton et al. which states "Gas within the pump may be detected to indicate an error in desired flow rate or displaced volume... Further, the flow rate may be corrected to the desired rate". This statement confirms that Newton et al. monitors the hydraulic flow rate of the pump and quantities of gas in the pump, as it would otherwise be impossible to realize that quantities of gas existed in the pump, and that the pump was not operating at the desired hydraulic flow rate.

Regarding Appellant's third argument, the examiner maintains that Newton et al. does teach monitoring electromotive force. As previously discussed on page 5, lines

18-20 of the final office action, the examiner points out that electromotive force has a measurement in volts, and that Newton et al. discloses that a specified voltage is supplied to the motor from a programmable switching regulator (col. 2, line 61 – col. 3, line 15).

Regarding Appellant's fourth argument, the examiner maintains that it would have been obvious to monitor the power consumption to determine the hydraulic delivery rate of Newton et al. As previously discussed in the Advisory action mailed on 16 August 2010 and the Final Office action mailed 08 June 2010, Regarding claims 17 and 24, Hofsaess et al. do not disclose the monitoring of the power consumption of the motor to determine the hydraulic delivery rate, however, it would have been obvious to one of ordinary skill in the art to monitor the power consumption to determine the hydraulic delivery rate instead of monitoring the voltage as a matter of engineering design choice, as power consumption and voltage are proportionally related, and one of ordinary skill in the art would choose what to monitor based on convenience.

Regarding Appellant's fifth argument, the examiner maintains that Newton et al. disclose monitoring the rotational speed of the electric motor driving the hydraulic pump. Firstly, the examiner points out that the rotational speed of a motor and the rotational speed of a pump driven by that motor are directly and proportionally related. As previously discussed in the Advisory office action mailed on 16 august 2010 and the Final Office action mailed 08 June 2010, the examiner points out that Hofsaess et al.

disclose monitoring the rotational speed and thus the pump rate of the pump and the rotational speed of the motor driving the pump (see col. 5, lines 5-9). The examiner further points out that Newton et al. also discloses monitoring the rotational pulses, and thus the rotational speed, of the electric motor (col. 3, line 6 - line 21). It is maintained that the rejections are proper.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Thomas Irvin/

Examiner, Art Unit 3657

/Bradley T King/

Primary Examiner, Art Unit 3657

Conferees:

Robert Siconolfi /RS/

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